

REMARKS/ARGUMENTS

Applicant notes the Examiner's finding of allowable subject matter in Claims 4, 5, 9-13, 20, 21, 23 and 24. Claims 4 and 20 have been amended so that they are in independent form, so those claims are believed to be allowable as are the claims which are dependent therefrom.

Of the remaining Claims 1-3, 6-8, 14-19, 22 and 25-27, Claims 8 and 22 have been canceled. The other remaining claims have been amended to clearly define invention over the references relied upon by the Examiner.

Claim 1 has been amended to specify that when the mold is introduced through the liquid level into the fiber slurry, the platen is retained out of the fiber slurry so that it is not immersed in the fiber slurry. In all of the references relied upon by the Examiner, at least a part of the platen carrying the mold is immersed in the fiber slurry. With respect to Hornbostel et al 3,850,793, the Examiner took the position that the arm (rigid casting) supporting the forming mold is not immersed in the slurry. Applicant submits that this is an incorrect interpretation of the teaching of Hornbostel. In Hornbostel two arms 31 are provided for supporting a plenum 33. Two separate molds 24 are provided in two chambers separated by a wall 55 of the plenum. The plenum 33 which corresponds to Applicant's platen certainly has at least its lower extremity immersed in the fiber slurry. As can be seen from Figure 3, the top surfaces of the mold 24 are disposed above the lower extremities of the plenum 33 which necessitates that the plenum 33 be lowered into the fiber slurry. Applicant specifically points out the advantage of not immersing the platen in the fiber slurry in that it facilitates drying operations. On page 12 of the specification, lines 20 and 21 it is pointed that the mold platen 126 remains above the liquid level of the slurry and remains dry. This significantly enhances the drying characteristics of the present invention in that it is unnecessary to dry the platen. It is therefore respectfully submitted that Claim 1 is patentable over the references cited.

Claim 2 is dependent on Claim 1 and specifies that the platen and the mold are inverted through 180° about an axis in close proximity to the platen. In Emery and other of the references relied upon, the mold is rotated into and out of a pulp slurry and moved from a downwardly facing position to an upwardly facing position where it is moved into a transfer die. Such an arrangement requires considerable more space and results in uneven drying of the molded part

because for example at a 90° angle, the moisture from one side of the part is draining down into the other side of the part. Whereas with Applicant's approach where the mold is immediately inverted 180°, and thus water drains from all portions of the molded part uniformly.

In Morris, 1,880,458 there is shown a complicated linkage which is utilized for moving the suction chamber S from the pulp and water mixture P in tanks 2 and 2a into engagement with a compression chamber B. In Morris, a sheet of pulp is subjected to pressure between the upper and lower meshes which are formed of a high resistance material such as Nichrome for supplying heat to the sheet of pulp for drying the same. Even with this linkage, an inversion through 180° about an axis in close proximity to the platen does not occur. At best, in Morris, the axis of rotation is remote from the suction chamber S which corresponds to Applicant's platen. It is therefore respectfully submitted that Claim 2 is allowable.

Claim 3 is dependent on Claim 1 and is patentable for the same reason as Claim 1 and calls for the advancement of the wet molded pulp product into a dry chamber and means for supplying heated air to the dry chamber to facilitate drying of the wet molded pulp product. The Examiner relies upon Hornbostel et al for advancing the pressed pulp product to a dry chamber. Applicant submits that this teaching cannot be found in the Hornbostel reference. Hornbostel merely teaches the making of a molded dashboard 21 as shown in Figure 3a in which a wire screen 22 is provided on the inner surface of the mold 24. For the other surface of the dashboard, bladders 129 are inflated in the press 20 to squeeze excess water through the molds. The dashboards then are blown from the molds and onto a conveyor (col. 10, lines 42-43). There is no teaching of moving these dashboards into a dry chamber. Rather all that is disclosed is that added to the slurry are a wet strength resin and a thermo-setting plastic resin which adhere to the fibers during the forming process. It is then pointed out that the thermo-setting resin melts upon subjecting the freshly molded dashboard to heat and when cooled the resin hardens to bind the fibers together and rigidify the dashboard (col. 3, lines 26-29). Thus the use of a dry chamber which is supplied with heated air is not disclosed or suggested by Hornbostel et al.

Claim 6 is also dependent on Claim 3 and is patentable for the same reason as Claim 3. The Examiner utilizes Morris 1,880,458 with respect to Claim 6 and states that a vacuum may be applied to the molded part while in the drying chamber (compression chamber). As pointed out

by Morris, compressed air is supplied to the chamber B to produce an air current which passes downwardly out of each chamber B to blow out as much moisture as possible from each sheet of pulp (page 3, second column, lines 123-127). This is not utilizing a vacuum to a drying a chamber are urged by the Examiner. It is therefore respectfully submitted that Claim 6 is clearly allowable.

Claim 7 is dependent on Claim 3 and is patentable for the same reason as Claim 3. In addition it specifies that means disposed in the framework includes means for inverting the platen and the mold through 180° about an axis in close proximity to the platen. As explained previously with respect to the references, such an arrangement is not provided. Another example is Hornbostel et al in which the mold 24 is shifted through 180° by rotating arms 131 about an axis which is remote from the mold or platen. It is therefore respectfully submitted that Claim 7 as now amended is also clearly allowable.

Claim 8 has been canceled.

Claims 9-13 have been allowed.

Claim 14 is an independent method claim which has been amended to specify that when the mold is immersed in the fiber slurry, the platen is free of the fiber slurry. As pointed out above, none of the references disclose such a method. It is therefore respectfully submitted that Claim 14 is allowable.

Claim 15 is dependent on Claim 14 and is patentable for the same reason as Claim 14. In addition, Claim 15 has been amended to specify that the platen and the mold are inverted through 180° about an axis in close proximity to the platen. As pointed out above, such an arrangement is not disclosed by the references cited. It is therefore respectfully submitted that Claim 15 is allowable.

Claims 16, 17 and 18 all include the subject matter of claim 14 and are patentable for the same reason as Claim 14. They also define additional features which are not shown by the references cited with respect to the claimed overall combined method.

Claim 19 is dependent on Claim 14 and is patentable for the same reason as Claim 14. It also specifies that the first mating mold has a screen pattern and that the second mating mold has a screen pattern. The Examiner argues that Hornbostel discloses a molded dashboard 21 which has the pattern corresponding to the pattern of the mold 24 and to the pattern of the press 40. This may be true. However, this is not what is being claimed. Applicant's invention requires the use of a screen pattern on both of the molds with which equal forces are applied to both of the molds so that the screen imprint is impressed on both sides of the molded product. This is not true in Hornbostel et al in which a screen pattern is only provided on the mold 24. The other side of the molded product merely carries the smooth impression of the inflatable bladder 129. Thus as pointed out in Applicant's specification on page 10 beginning with line 27, in Applicant's invention both of the first and second exposed surfaces are relatively smooth but have a texture which mirrors the screen pattern of the first and second mating porous molds. By utilizing the same pressures and procedures on both molds, the thickness of the walls forming the molded pulp product can be precisely controlled, which also makes it possible to control the pitch of the side walls so that a predetermined predictable stacking pitch can be provided on the containers so that they can be readily nested and de-nested. It is also pointed out that by providing such precision it is possible to ship more product in a truckload as for example 5% to 10% more product than can be achieved with conventional nested molded products. The teaching of Hornbostel et al certainly does not suggest this invention. In Hornbostel et al, the bladders 129 are merely provided for removing excess moisture. There is no attempt to provide a screen pattern on the other surface of the mold. In fact, this is unnecessary in a product such as a dashboard because typically only one side of the dashboard is exposed to the interior of the vehicle. It is therefore respectfully submitted that the method called for in Claim 19 is not disclosed by Hornbostel et al or any of the other references cited by the Examiner.

Claims 20 and 21 have been allowed. Claim 22 has been canceled. Claims 23 and 24 also have been allowed.

Claim 25 is an independent claim directed to a molded fiber product which specifies that the first and second exposed surfaces have impressions corresponding to the screen patterns of the mold surfaces of the first and second mating molds. The use of mating molds both of which have screened surfaces to provide a molded fiber product having first and second exposed

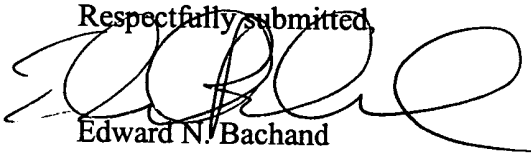
surfaces with impressions corresponding to the screen patterns of the mold surfaces of the first and second mating molds certainly is not disclosed or suggested by any of the references relied upon by the Examiner. It is therefore respectfully submitted that Claim 25 is allowable.

Claims 26 and 27 include the subject matter of Claim 25 and are patentable for the same reasons as Claim 25. As pointed out above, the provision of such a product having precise thicknesses and predetermined tapers provides a product having a greatly improved appearance and which has additional advantages such as facilitating nesting and de-nesting of the product.

In view of the foregoing, it is respectfully submitted that all of the claims now of record are allowable and that the application should be passed to issue.

The Commissioner is hereby authorized to charge any fees associated with this communication to our Deposit Account No. 50-2319 (Order No. A-69853/ENB (467171-62)).

Respectfully submitted,



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